



Parnkalla muelleri
(Distant)
Grass Faerie

METAMORPHOSIS

AUSTRALIA

Magazine of the Butterfly & Other Invertebrates Club

ISSUE NO: 52

DATE: MARCH 2009

Price \$6.00

ISSN: 1326-0006

<http://www.boic.org.au>

CLUB PLANNING AND ORGANIZING GROUP - 2008

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PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter.
See BOIC Programme.

CONTACT ADDRESS AND MEMBERSHIP DETAILS

PO Box 2113, Runcorn, Queensland 4113

Membership fees are \$20.00 for individuals and \$25 for schools and organizations.

AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, native bees, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:

March issue – February 21st

June issue – May 21st

September issue – August 21st

December issue – November 21st

COVER

Parnkalla muelleri (Distant), Grass Faerie - Painting by Lois Hughes. Prints of this painting may be available from the artist. Ph. 07 3206 6229



FROM THE PRESIDENT

Recently, I received notification from Brisbane City Council that our application for a further grant to help meet the extra cost of printing our Magazine in colour was successful. I wish to thank Jane Prentice, Councillor for Walter Taylor Ward and Michael Thorley, Catchment Coordinator Inner West Catchments for their warm support of our application. Thanks again to the Brisbane City Council for their grant of \$1600.00.

The annual cost of printing and mailing four 36-page colour editions of the Magazine to members is currently \$25.50. Some copies are exchanged with other organisations while others are sent to libraries or are archived. The Club has significant other costs such as insurance premiums. The increased printing costs have exerted some pressure on our finances and while the generosity of the Brisbane City Council has somewhat eased that pressure, I will, at the next Annual General Meeting (AGM), be proposing that the annual membership fee be increased by \$5.00 to \$25.00.

You will find an insert about the AGM accompanying this edition and I urge you to attend if you are able to do so. The “Swap Meet” to follow the meeting should be interesting!

Each year at the Indigi Expo in June and at the Society for Growing Australian Plants big sale in September, we find there is quite a demand for butterfly host plants. The funds we raise from the sale of plants are a great help to the Club and we could really raise more funds if we had a greater supply of plants. You can assist by donating plants. Please contact Daphne or myself if you are able to help.

Thanks again to all the contributors to this our latest edition. Best wishes **Ross**

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Grass Faerie (*Parnkalla muelleri*) (Distant)

(Alternative common name: Yellow Sugarcane Cicada)

Except for a species from Western Australia (known only from a single male) the Grass Faerie is the only member of this genus. The genus is very closely allied to *Tamasa* and shares with it distinctive features including widely spaced eyes and long antennae.

It has, in the past, been considered to be a pest of sugarcane (hence its alternative common name).

The species emerges from October to March and is found from Coen (Northern Queensland) south to Kyogle (Northern New South Wales) and west to Mt. Garnett and Carnarvon Gorge (Central Queensland).



Parnkalla muelleri – showing size relative to an adult's finger. Photo Rob Macsloy

Large emergences follow heavy rain and it can be abundant in grassy areas. The nymphal food plants include several members of the Poaceae family [including Blady Grass (*Imperata cylindrica*), Guinea Grass (*Panicum maximum*) and, of course, Sugarcane (*Saccharum officinarum*)].

The song (or call) is a harsh grating buzz containing both continuous and pulsating components. The song is nearly inaudible to the human ear although I can recall driving (in the rain) near Gatton with the window

only partially down and Lindsay Popple hearing the call some 30-40 metres away – the benefits of youthful ears!!

Eggs are laid in the stems and leaves (usually dead) of its host plants and under normal conditions the nymphs develop to adult stage within a year though some do not emerge until the next season.

Rob Macsloy

References:

Moulds M.S. (1990) .Australian Cicadas. Pub.: New South Wales University Press.
Popple L. Website: Australian Cicadas, the Cicadas of Central Eastern Australia.
<http://bacs-s02.bacs.uq.edu.au/sib/ins-info/>



The Katydid *Ectopistidectes viridis* Rentz

I found this katydid at the Bunya Mountains in early Autumn 2008. They were common in *Acacia* spp. and stunted *Bursaria spinosa* and *Alyxia ruscifolia* bushes in a tall open eucalypt forest with grassy understorey. They were close to a cliff line and confined to an area of probably only a few hundred square metres. They were making quite a “ruckus”, each calling in a manner similar to the territorial "scolding" made by the scrub wren. In fact I thought the noise was coming from birds nesting in the trees,



Ectopistidectes viridis Rentz
Photo Ian Menkins

until closer inspection revealed a katydid was responsible! Two workmen were brush cutting the paths nearby and I could still hear the incessant chirping of the katydids above the drone of the engines! As soon as the brush cutters stopped the true volume of the katydids' clamour became apparent. They were the dominant sound in the area, even drowning out the cicadas.

David Rentz identified the species from photographs as *Ectopistidectes viridis* Rentz.

He says it is known from localities around the Blackdown Tableland. There is one other known species, *E. daptus*, from up Maryborough way. It is smaller and more robust. Both probably are predators. The find at the Bunya Mountains represents a significant range extension for *E. viridis*.

Incidentally, I found a small colony of the elusive mountain katydid (*Acripeza reticulata*) at this same location. There were many other unusual insects as well.

Ian Menkins

A Splendid Ghost Moth from Iron Range, North Queensland

Within Australia the moth family Hepialidae is especially rich in species and is often referred to as Ghost Moths, or Swift Moths. The genus *Aenetus* Herrich-Schaffer presently contains fifteen described species from Australia, and is represented from all mainland Australian states and territories. A single species is known from New Zealand, and at least one species is shared with Indonesia.



Moths from the genus *Aenetus* are amongst our most beautiful insects, but surprisingly are not often encountered. They are sometimes referred to as Splendid Ghost Moths. Their habitats include rainforest, wet sclerophyll and eucalypt forest, and range in altitude from sea level to above 2000m. Many of the adult moths either aren't, or are rarely attracted to light – explaining their infrequent observation. Resting during the day, either on vegetation foliage, or sapling trunks, adults are extremely cryptic, with their wing shape and colouration blending perfectly with their natural background.

The very early larval instars of some, and possibly all species, is spent in an environment living under logs, for an uncertain timeframe, and possibly feeding on algae growth, or decaying wood. Later instar larvae tunnel into the trunks and stems of living trees or shrubs, firstly by tunnelling horizontally, then vertically downwards. The entrance to the tunnel is covered with a webbing membrane comprised of silk and finely chewed wood particles. Larvae feed on bark regrowth and sap flow from around the tunnel entrance, and this feeding pattern creates a distinctive vestibule – sometimes characteristic for an individual species. Final instar larvae pupate in the vertical tunnel, and the webbing membrane covering the vestibule may be either broken, or left intact, depending on the individual species, with the pupa pushing out and extruding from the tunnel, allowing the newly emerged moth to crawl partway up the tree trunk, and find a foothold to expand and dry its wings. Emergence of the adult moths usually occurs late in the afternoon, often around dusk, or shortly thereafter.

The distributions and biologies of most of our *Aenetus* species are very poorly understood. One particular species, *Aenetus tegulatus* (Pagenstecher) has been recorded from the Cairns district, particularly from the Atherton Tableland, from Townsville, and also Darwin, from quite a wide range of rainforest or open forest tree types. On the Atherton Tablelands, larvae regularly utilise *Glochidion* sp. (Euphorbiaceae), as well as *Casuarina* sp. (Casuarinaceae), particularly in wet sclerophyll areas. Recently I was fortunate to rear a number of specimens from Iron Range, where the larvae had been feeding within a species of *Glochidion*, as well as a *Commersonia* sp. (Sterculiaceae). Up until now, in Queensland, *Aenetus* species have not been recorded from north of Cooktown (Common 1990), but this reflects purely on a lack of collecting or observations by naturalists. The adult female occurs in two distinct colour morphs – a brown morph, and a green morph (Figs. 1 and 2). The male occurs in an aqua green colour morph (Fig. 3). All forms are figured here, together with an image of the silk and wood fragment webbing covering the vestibule (on *Commersonia* sp.) (Fig. 4), as well as an image of the pupal exuviae extruding from the tunnel through the unbroken webbing (on *Glochidion* sp.) (Fig. 5). Females average 7 – 10 cm in wingspan, males average 6 – 7 cm.

David Lane





Fig.1



Fig.2

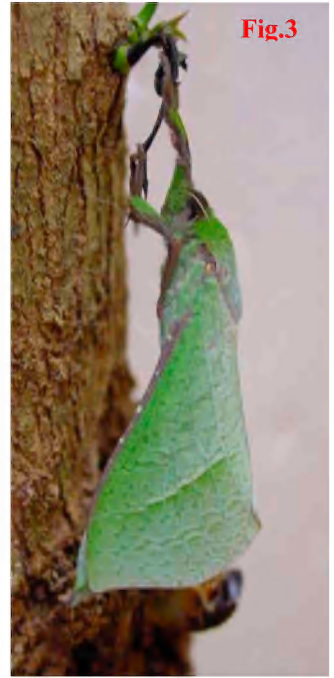


Fig.3



Fig.4



Fig.5

Photos David Lane



Saltbush Blue and Samphire Blue butterflies at Boondall Wetlands

The Saltbush (or Chequered) Blue butterfly, *Theclinesstes serpentata*, can be seen at Brisbane's Boondall Wetlands, during most months of the year, in the saltmarsh and surrounding area. It is often seen flying in company with the similar looking Samphire (or Saltpan) Blue butterfly, *T. sulpitius*, which is itself restricted to the saltmarsh. Because of this similarity the two species are difficult to tell apart, and almost impossible whilst on the wing.



Male Saltbush Blue – lateral view



Male Saltbush Blue upperside

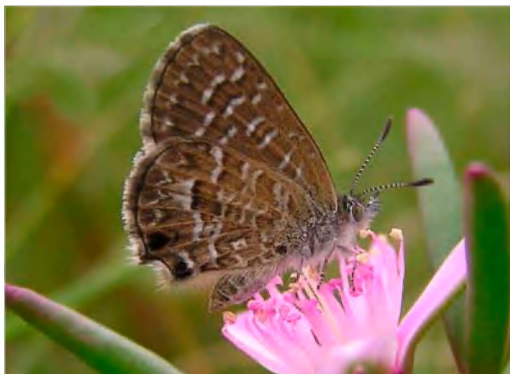
They are both small greyish butterflies, less than 2cm across outspread wings. The Saltbush Blue has the terminal edges of its wings “chequer-boarded” in alternating white and grey with patchy areas of white on the underside. It also has more blue basal areas on the upperside compared with the plainer looking Samphire Blue.

The larval foodplants for the Saltbush Blue at Boondall are the saltbushes *Einadia hastata* and *E. nutans* which grow both in and around the edges of the saltmarsh. The hostplants for the Samphire Blue are, as its name suggests, the local samphires (“Bead-weeds”) *Halosarcia indica* and *Sarcocornia quinqueflora*, although other species of samphires and seablites, as listed in Moss (2005), may be utilised. There are good images of these plants in the popular publications “Mangroves to Mountains” and “Wild Plants of Greater Brisbane”.





Samphire Blue (*Theclinessthes sulphitius*)
on *Halosarcia*



Samphire Blue (*Theclinessthes sulphitius*)
on *Sesuvium*

Photos Russel Denton

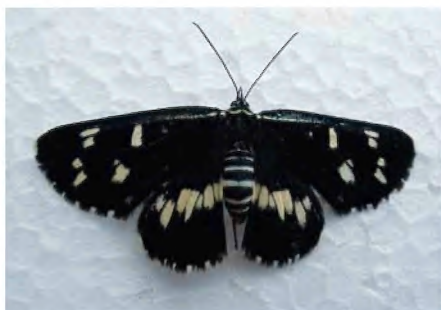
Russel Denton and John T. Moss

Reference:

Moss, J.T. 2005. Butterfly Host Plants of south-east Queensland and northern New South Wales. Second (revised) edition. Pub.: BOIC Inc.

***Cruria donowani* (Boisduval, 1832) Noctuidae, Agaristinae**

With my family, I spent several days between Christmas and New Year at Upper Thane Creek west of Warwick, Qld. There had been good rain in the previous months and the vegetation was growing well. Each day I saw several specimens of a black and white moth with a wingspan of about 5 cm. Reference to the literature and, later, the Internet confirmed that the moth was *Cruria donowani*.



Cruria donowani - Adult

In mid afternoon on December 31st, we noticed a female moth laying eggs on a prostrate herb growing in sandy gravel on Byron's Gully, a tributary of Upper Thane Creek (28° 14' S, 151° 41' E). Closer examination led to the discovery of larvae in three different instars. I collected the last instar larva and some host plant.

Two days later that larva darkened in colour and became very restive. Being uncertain of the moth's pupation habits, I

placed crumpled tissue, leaf litter, grass clippings, damp soil, a tube of paper and a tube of corrugated cardboard in a container. After several hours of ceaseless



exploration, it was clear that the caterpillar was not happy with these offerings. I then added a small roll of eucalypt bark to the equation! Within minutes the seeker had disappeared.

On examination two days later, a cleverly constructed cocoon approximately 17 mm long was found in the roll of bark with a coating of chewed bark as camouflage. The adult moth emerged fourteen days later.

The host plant was identified by Glenn Leiper as Tarvine (*Boerhavia* species St George) – Family: Nyctaginaceae. Common, 1990, in “Moths of Australia” lists *Alocasia macrorrhizos* (Araceae), *Hibbertia* (Dilleniaceae), *Cissus antarctica* (Vitaceae) and *Boerhavia diffusa* as hosts of *C. donowani*. It is probable that these plants are also the hosts of the related species *C. synopla* which occurs in wetter forests “on the Atherton Tableland and from southern Queensland to central New South Wales” (Common, 1990).

The Queensland Plant Census (2007) shows that *Alocasia macrorrhizos* has been split into two species with *A. brisbanensis* the most widespread from north Queensland to New South Wales whilst *A. macrorrhizos* is restricted to far north Queensland. There are about 75 *Hibbertia* species listed. Since Common’s listing, *Boerhavia diffusa* has been split into 12 species, some coastal, some inland and others both. *B. dominii* is common “on heavy soils” (Leiper et al) but the specimen illustrated more fits the description and location of *Boerhavia*. sp. St George.

Plate 32.11 of Common (1990) has a colour photograph of a “*C. donowani* larva” with black segmental bands broken by white circular lines. This does not quite match the images of the larvae of *C. donowani* accompanying this article that show uninterrupted black bands. Perhaps there are variations between larvae.

It would be valuable to learn of further observations of both *C. donowani* and *C. synopla*.

References:

- Common, I.F.B., 1990. *Moths of Australia*. Melbourne University Press.
- Leiper, G., Glazebrook, J., Cox, D., Rathie, K. 2008. *Mangroves to Mountains (Revised Edition)*. Society for Growing Australian Plants (QLD Region) Inc. Logan River Branch.
- Bostock, P.D. & Holland, A.E. 2007. *Census of the Queensland Flora 2007*. Queensland Herbarium, Environmental Protection Agency, Queensland Government.

Acknowledgements:

Mrs Jill Common for permission to reproduce a photograph from “Moths of Australia,” Glenn Leiper for plant identification, John Moss for plant information and Ted Edwards for the following (edited) comments.



“The record of *Cissus antarctica* for *C. donowani* comes from Scott (Scott, A.W. 1891. Australian Lepidoptera and their transformations. 2. pp. 16-17, pl. 15. Australian Museum, Sydney.) who illustrated both foodplant and adult moth.

The record of *Alocasia macrorrhizos* is from David Mc Alpine (McAlpine, D.K. 1981. Food plant record for *Cruria donowani* (Boisduval) (Lepidoptera: Agaristinae). Aust. ent. Mag. 7 (6): 84.)

This record is confirmed by Brian Cantrell (Cantrell, B.K. 1984. Insects associated with *Alocasia macrorrhiza* (L.) G. Don. (Araceae) in Queensland. Aust. ent. Mag. 10 (6): 85-88.)

The record of *Hibbertia* is Ian Common's own record. It is certainly *C. donowani*. In his publications he does not mention *Hibbertia scandens* and if, as I suspect, the record is from the Canberra area it would be another species of *Hibbertia* but it could have come from the south coast of NSW where *H. scandens* occurs.”

Ross Kendall



Cruria donowani larva – 2nd instar



C. donowani larva – 4th instar



C. donowani larva – final instar

Photos Ross Kendall





Cruria donowani - Prepupal larva RK



Fresh Cocoon RK



C. donowani -Adult – upperside HK



Empty Cocoon HK



C. donowani -Adult – upperside HK



C. donowani larva scanned from Moths of Aust.

Photos Ross Kendall (RK)
Hongming Kan (HK)

Tarvine →
RK



Giant Mosquito: *Toxorynchites speciosus* (Diptera : Culicidae)

When my wife asked me to investigate the buzzing sound she had heard in the dining room over the past couple of days, I was surprised to find a giant mosquito. This fellow was huge, 2 to 3 times the size of other mosquitoes found here. What diseases did it carry, Ross River Fever, Malaria, Dengue Fever or some flesh eating parasite?

I consulted the trusty Wildlife of Greater Brisbane, published by the Queensland Museum and there it was, on page 134 of the new edition. Giant Mosquito, *Toxorynchites speciosus*; the article states it has a length of 12-16mm and has a metallic purple and blue body with silver markings. Its distribution is northern NT and eastern Australia from Cape York, QLD to Sydney NSW.



Toxorynchites speciosus - Photo Peter & Bev Hendry



Toxorynchites speciosus larva - Photo Peter Hendry

The notes on its feeding habits, state that both sexes feed on nectar, not blood and the larvae feed on other mosquito larvae.

Ho, ho, ho, on the good list (well it was Christmas day). The big fellow was released into the backyard to carry on its good deeds. I had always assumed that all

mosquitoes were blood-suckers, but as it turns out this is an exceptional case.

Coincidentally John Moss drew my attention to a larva of this mosquito which had taken up residence in an aquarium where he had native fish fry. Although he had not seen any actual predation, the fish numbers were steadily dropping while the larva had increased in size!

Peter Hendry



The Circle of Life

It was late afternoon, the April sun lit up the tree and there she was within reach, just above head height. Why we hadn't noticed her before made me think I must have been very unobservant, but I know I don't miss much!. Chewed leaves are always investigated, rolled up ones peered down to check for inhabitants, but gingerly so in case a spider suddenly jumped out and ran up my arm as one did once, scaring me. I had looked frequently in this guava tree, after finding the previous one here in 2007. Once again, her camouflage colours of green and yellow blended perfectly with leaf and branch, protecting her from prying eyes of both friend or foe. Fully grown, with front legs extended (measuring 29 cm) hung this splendid female Goliath Stick Insect.



"Mrs. Sticky" – a painting
by Lois Hughes

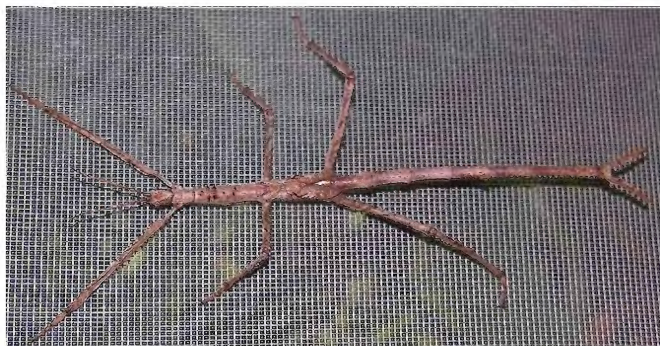
In contrast to the former female we had found on the same tree (which became the Creature Feature in Issue 45 of our June 2007 Newsletter) she didn't fuss too much when I re-located her, with guava branches for food and support, into a coolite box, one of the same large boxes, with mesh lids, in which I hand rear caterpillars. Quickly settling into her new surroundings, she contentedly chewed her way through a continuous supply of guava leaves and only occasionally chose Black Wattle or eucalypt for variety. From April 19th, 2008, she continued to lay 3 or 4 eggs daily.

I soon learned her fearsome appearance was for show only. She had a sweet and trusting demeanour and so began one of the most rewarding and enjoyable relationships I have had with any creature.

In early May, I found another stick insect, about 10 cm. long, not beautifully coloured, just shades of mottled grey like a dead stick, also well camouflaged, on another guava tree. I brought it in to see if Mrs. Sticky, as she became affectionately known, would enjoy the company. Not knowing the species or gender of this one, he was simply called Little Sticky. I was fascinated to see it shed its skin one evening as its growth to maturity continued.



They both responded to my voice and invited my touch by extending front legs and crawling up my arms, she, heavy, with scratchy thorny legs, while the feather-light touch of Little Sticky was barely discernible.



“Little Sticky” – Photo Peter Hendry

Learning to read their body language told me when they wanted a drink or were ready to eat. She, particularly, responded by extending her palps, the small segmented “feelers” situated above and below each side of her mouth. If thirsty she dropped her head, exploring the surface beneath her for droplets, when I sprayed her with water and would variously drink from a teaspoon or even a saucer. If hungry, the proffered leaves were eagerly grabbed, held and devoured in a roughly circular movement. Little Sticky consumed much less and would go for several days without eating, only drinking. I suspect he may have been preparing to shed his skin as he would do a weird dance, tail curled, scorpion-like over his back, sometimes disappearing behind a curtain or chair, then appearing again to resume eating.

During the June 2008 Redlands IndigiScapes weekend B.O.I.C. attended, I took my cage and stickies, much to the enjoyment of children and adults alike many requesting photos holding them. One young man, Ben Jacobs, shared his considerable knowledge with me and promised to build me a proper cage, explaining mine wasn’t deep enough to allow Little Sticky to shed his skin properly.

Thereafter they were given their freedom from the cage and contentedly hung from the fly-screens or the curtains to which I pegged their food branches. I lost sight of Little Sticky a few times but when I called him he trotted out from behind the curtains or chair.

But things were a-changing, beneath the mottled brown Little Sticky had a tinge of green and some pinkish spines faintly visible and once more he hadn’t eaten for several days. Next morning Little Sticky had gone, replaced by Boy Sticky resplendent in his new suit of clothes of green and yellow, with a white stripe down his now full length wings. On the curtain above him, hung his shed skin which he devoured over several hours.

My once placid little fellow had grown up. He was a “big boy” now, with an attitude to match. No longer wanting my company, he had other things on his mind. He courted Mrs. Sticky and was soon mating with her and then began exploring. No longer content to just stay on the fly screens, he began trying out his new wings while we were sleeping. After one such adventure, I discovered him at the other end of the house, on the floor



behind the toilet bowl, covered in cobwebs and very pleased to see me as he was really hungry. It was fortunate the lid was closed overnight or his adventure may have ended in disaster! So began night curfew, back in the box!



Close-up of head and thorax – Photo Peter Hendry

Being Spring, I soon discovered two other males on the guava tree and brought them inside where they also competed for Mrs. Sticky's favour. Boy Sticky really intimidated them, swishing his long antennae back, he would glare at them and if they dared to move he would charge menacingly towards them. Retreating, they would sit quietly for a more opportune moment before creeping back. For the sake of peace, I removed one to the guava tree where he sat for several days, the other taking himself off in search of his own mate. So life continued.

Mrs. Sticky fell a couple of times and I began to wonder if all was well. Ben delivered my large wooden cage which he and Zac had thoughtfully covered in fly screen to stop the eggs being flung out through the wire and it was a God-send. Boy Sticky was free to roam and I didn't have to wonder if he'd come to a "sticky" end in an inappropriate place. Mrs. Sticky also thoroughly enjoyed her new home for several weeks but still wanted to be handled and talked to.

Sadly though, she was nearing her end, becoming lethargic, hardly eating and losing body weight. She passed away quietly after a very productive and protected life on Dec. 12th 2008. I will miss her. She was such good company.

Boy Sticky also got weaker and was falling. Maybe he missed his mate too as they were inseparable and constant companions. Apparently males only live for 8 or 9 months compared with the female's life span of 18 months or so. Sadly Boy Sticky has also died.

But happily, life goes on. Mrs. Sticky's offspring have begun emerging, the first on Dec. 22nd and have continued emerging ever since, sometimes 3 or 4 at a time – thirty four so far – mostly doing so overnight. Full of life and very adventurous, it's challenging transferring them from the small container to their new cage as they scurry everywhere. They soon settle into a favourite spot and after a drink, begin eating. I offer them a variety of small leaved plants initially- one of their favourites being *Kunzea flavescens* – basically plants of the Myrtaceae family which includes eucalypts and guava but they will also eat the young leaves from the Banksia Rose and some wattles. I use small potted plants of guava which is their favourite, as well as the freshly gathered new growth tips of the other plants, poked through alfoil into florists foam, in containers of water. I spray the leaves and walls of the box frequently, especially during the very hot days we've been



having, to prevent dehydration. At the time of writing, Jan. 23rd, the earliest nymphs are one month old and have grown to 5cm long, tripling their size.

I have much to learn from these creatures as the journey continues, completing the circle of life.

Lois Hughes

P.S. Guava trees have established themselves along the roadsides and in properties in areas of Mt. Cotton and the fruits are eagerly sought after, although checking for fruit fly larvae is essential unless one doesn't mind some added protein!

Guavas, *Psidium guajava*, of the Myrtaceae family, are large shrubs or small trees, 3 to 8 metres high, with large leaves 7 to 15cm long.

What Fly is that?

Martin Bennett, a friend to some members of BOIC, sent me an image of a “bug” he had taken in his garden at Mindin west of Ipswich SE Qld, requesting information about what it was. At the time my only answer was that it was a fly of some sort. Some weeks later I photographed the same species at a light trap near Deepwater south of Tenterfield northern NSW. I continued research into what it could be, but to no avail. I approached John Moss with the query. After searching through all the insect related books in his library we found it in *Insects of Australia* by George Hangay and Pavel German.



Comptosia sp. - Photo Martin Bennett



Comptosia sp. - Photo Peter Hendry

The information gleaned includes the following. The fly is a *Comptosia* species, in the family Bombyliidae (Bee Flies). They feed on nectar and are often seen hovering near flowers, as per Martin's image. The genus contains some of Australia's largest flies, having wingspans of 70mm. In the Bombyliidae family, some females flick their eggs into the nests of bees and social wasps. The larvae are parasites of these and other insects. In general the family inhabits arid and semiarid regions.

Peter Hendry



**Description of the egg of *Jalmenus inous inous* (Hewitson)
(lepidoptera: lycaenidae)**

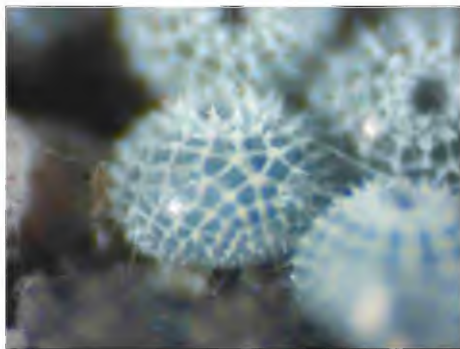
A friend of mine made a trip to Western Australia late in 2008 to take photographs of any butterflies that were on the wing. During the trip he noticed a female *Jalmenus inous inous* ovipositing on a low growing Acacia. Knowing that I am trying to photograph as many butterfly eggs as possible, he collected some of the eggs and sent them to me in Cairns. When they arrived, I noticed that the eggs have not been described in any books, so I compiled the following text.

Egg: Diameter 0.50 mm; Bluish white; Mandarin shaped with a course reticulated pattern of mostly square ridges; single spines arise from where these ridges intersect; the spines around the sunken micropyle face inwards; eggs are laid in clusters in crevices and against irregularities on the foodplant.

Bob Miller



Jalmenus inous inous egg close-up



Egg side view

Photos Bob
Miller using
the club's
microscope/
camera



Cluster of eggs



Gems of the North:

On a trip to Cairns late last year I had the opportunity to set up the light trap at various places along the way and many gems of the north presented themselves on the light sheet. One such moth is *Milionia queenslandica*, Jordan & Rothschild 1895, having an iridescent blue body, brown-black wings with red and yellow markings; it surely is a gem amongst lepidoptera in general.

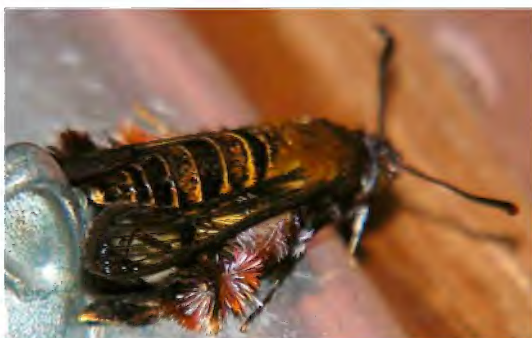
M. queenslandica is a member of the family Geometridae and is placed in the subfamily Ennominae. Its larva and hostplant are unknown and

Common (1990) gives its distribution as occurring from Cooktown south to Innisfail, but I had two specimens appear further south, 28k NW of Ingham, on the 20th October 2008. The famous Butterfly Man of Kuranda, F.P. Dodd sent specimens of *M. queenslandica* and the skipper *Chaetocneme porphyropis* (known then as *Phoenicops porphyropis*) to the Australian Museum in 1908. At the time the museum entomologist was W. J. Rainbow. After examining the two specimens, he was prompted to write the following. "Although obviously distinct from one another, it would nevertheless be an exceedingly difficult matter to differentiate between the two when on the wing and in flight. Our Australian Lepidoptera, although presenting numerous instances of protective colouration, affords very little in the way of true mimicry. For this reason such an instance as the one referred to above is decidedly interesting." (Records of the Australian Museum. No. 2. Published 11th September, 1908)

One family of moths that are true mimics is Sesiidae; these clear-winged moths are diurnal and take on the appearance of wasps and bees. I had my first encounter with this family, on the night of



Milionia queenslandica



Melittia doddi showing the hind leg scale tufts



the 22nd October 2008, some 18km S.E. Millaa Millaa. It was in the form of *Melittia doddi*, Le Cerf 1916, a member of the subfamily Sesiinae. One of the distinguishing features of the genus *Melittia* are the scale tufts on the hind leg. These scale tufts are said to simulate the pollen gathering devices of certain bees (Duckworth and Eichlin, 1974). *M. doddi* occurs from the top of Cape York to at least as far south as my record. Accounts of the closely related Indian *M. amboinensis* have the larvae feeding on Snake Gourd vine. They bore into the main stem of the vine causing an elongated gall to form. The mature larva leaves the gall to pupate in the soil in a specially prepared earthen cocoon (Duckworth and Eichlin, 1974).

A rather beautiful moth that came to light 28km NW of Ingham was *Agrotera pictalis* (Warren, 1896) a member of the family Crambidae in the subfamily Pyraustinae. Like so many of our moths little is known of its biology. Another member of the same subfamily to make an appearance that night was *Talanga sabacusalis* (Walker, 1859). Again little or nothing is known of its biology. A third member of this



Agrotera pictalis



Talanga sabacusalis



Glyphodes multilinealis

subfamily to come to light that night was, *Glyphodes multilinealis* Kenrick, 1907. *G. multilinealis* is found in Japan, Fiji, Niue, Cook Islands, Society Islands and Australia. On the Cook Islands where it is known as the Fig Tiger-moth, the larvae feed on *Ficus prolixa*.

Also making an appearance that night was *Problepsis apollinaria* (Guenée, 1857), a member of the family Geometridae, subfamily Sterrhinae. This exquisite creature has raised scales of silver circling the eye spots on the forewing and running down across the hindwing. It is as if the maker had dripped silver over its wings. *P. apollinaria* occurs in the Indian Subregion, Borneo,



Problepsis apollinaria



New Guinea and Northern Queensland.

Further north at the time and location of the Sesiidae above, *Aglaopus gemmulosa* (Whalley, 1976) made an appearance. I was surprised to find such a large and beautiful moth was only described in 1976, from material collected by Common and Upton in 1964 and Dobson in 1967 (Whalley, 1976). *A. gemmulosa* is a member of the family Thyrididae, subfamily Striglininae and another of our moths that has an unknown biology.



Aglaopus gemmulosa

Still further north, west of Babinda on the night of the 23 of October 2008, the small but beautiful, *Anticrates metreta* (Turner, 1903) came to light. *A. metreta* is a member of the family Lacturidae and occurs in rainforest from Cape York to Hinchinbrook (Common, 1990).



Anticrates metreta

Many thanks to Ted Edwards for identifying *Melittia doddi* and Axel Kallies for providing an updated checklist of the Sesiidae.

Photos Peter Hendry

Peter Hendry

References:

- Common, I.F.B. 1990. Moths of Australia. Melbourne University Press
Duckworth, W.D. and Eichlin, T.D. 1974. Clearwing Moths of Australia and New Zealand (Lepidoptera: Sesiidae) Smithsonian Institution Press Washington DC
Whalley, P.E.S. 1976. Tropical Leaf Moths, A monograph of the subfamily Striglininae (Lepidoptera : Thyrididae) The Gresham Press England.

EXCURSION REPORTS

Visit to Ian Ferrier's Garden, Mitchelton Sunday 19th October 2008

Ian's garden was an inspiration to all who attended this excursion. Established in the early 1990s, the 1200 m² block consisted of an impressive range of native rainforest trees. Ian and his wife Judy are fortunate in having such a large suburban block in which to plant some of the larger rainforest species. There was so much to see - we started the day at 10am and didn't leave until 3pm!



Something that caught my eye in the garden was a large Native Finger Lime tree (*Citrus australasica*) bearing many edible fruits. Each fruit consists of many small, juicy pearls. The Native Finger Lime is a host plant for the Orchard, Dainty, and Fuscous Swallowtail butterflies. Other butterfly host plants in Ian's garden included *Brachychiton acerifolia*, *Cryptocarya erythroxylon*, *Cryptocarya triplinervis*, *Drypetes deplanchei*, *Eupomatia laurina*, *Lomandra* sp., *Melodorum leichhardtii*, *Pipturus argenteus*, and *Scolopia braunii*, to name a few. Ian had labeled many of these species for ease.

Despite the abundance of native host plants in the garden, we encountered an Orchard Swallowtail larva on an exotic Cumquat Tree, and we witnessed a Tailed Emperor laying eggs on the new growth of a Poinciana! In addition to these butterflies, we also spotted a Pale Triangle, Blue Triangle, Common Crow, Hairy Line-blue, Common Pencil-blue, Lemon Migrant, Cabbage White and possibly a Dingy Grass-skipper. For a moment we witnessed a battle taking place between the skipper and a flower spider. The skipper continually landed in the same resting place, on a leaf very close to the spider. The small crowd watched tentatively as the spider lashed out and attempted to capture the skipper on several occasions. I believe the skipper eventually caught on to this game and started to land on a different leaf.

Other interesting invertebrates of note included some brightly-coloured Hemipterans congregating on both the native *Hoya macgillivrayi* and exotic *Hoya* flowers. Ian also showed us an impressive red-triangle slug, *Triboniophorus graeffei*.



Some club members who visited Ian and Judy's garden



Hemipterans on *Hoya*





Equally impressive was the butterfly and moth collection of Ian's grandfather. He was an avid collector of moths in particular, and could possibly have the largest private collection of *Aenetus* moths known! The collection also housed a number of brilliantly-coloured butterflies such as *Trogonoptera brookiana* collected from Malaysia in the 1970s. Ian's grandfather also put together a stunning bird collection which we were fortunate enough to see.

Many thanks to Ian and Judy Ferrier for welcoming BOIC members into their home, and for providing us with a lovely cuppa and nibbles on their deck. A very pleasant day was had by all.

Alisha Steward

Rainforest Liqueurs, Conondale - Saturday, 29th November 2009

In the week leading up to this excursion, some doubts were in mind about whether we would actually go through with it. Storms and localised flooding had hit the area, and we were wondering if we would end up trapped at John and Mary King's rainforest liqueurs property if another storm hit!

Luckily for us, the weather was kind. Our meeting place was the Barung Landcare Nursery at Maleny. The nursery was low with stock at that time, as they are in the process of moving to new premises. A few of us made purchases of butterfly host plants, and then we headed off for John and Mary King's property in lovely Conondale.



A selection of liqueurs available from John and Mary



John and Mary were extremely welcoming. Food, coffee and tea were plentiful. We started with some native nibblies, including kangaroo mince pizza and Lemon Aspen butter with muffins. John talked us through each of the plant species used in the liqueur-making process. Leaves, fruits or flowers are used, depending on the species. All material is harvested sustainably from trees on the property. The discussion was followed by liqueur tasting. My personal favourites were the Wild Mint (*Mentha diamenica*) and Anisata (*Backhousia anisata*) liqueurs. Butterfly host plants made into liqueurs included *Acacia macradenia* (flowers), *Citrus glauca* (fruits), *Eupomatia laurina* (fruits) and *Ficus coronata* (fruits).



Group in rainforest on property

After the liqueur tasting we walked through John and Mary's property, situated within the headwaters of the Mary River catchment. The freshwater ecologists amongst us were head-down-bum-up in the creek looking for aquatic invertebrates. We walked past a stand of tall, majestic flooded gums and through some beautiful, steamy rainforest. The rainforest was impenetrable in some places, and we arrived at a few "dead ends" here and there. John led us to a large,

impressive Richmond Birdwing vine. A highlight of the walk for me was the discovery of a brilliantly-coloured, shiny beetle, identification unknown. Towards the end of the walk I had an unpleasant encounter with a colony of bulldog ants amongst the stand of Bunya Pines. That's what happens when you unknowingly step onto their nest. They are sure good at inflicting pain! Some of the world's most venomous ants are bulldog ants.

We passed a number of Yellow-Tailed Black Cockatoos just before arriving back at John and Mary's house. We all had a very enjoyable day (despite my bulldog ant attack!). A big thank you to John and Mary for looking after us, and for providing the liqueurs for tasting.

Alisha Steward

Ed. You will find enclosed with the magazine, a flyer advertising liqueurs available from John and Mary King.

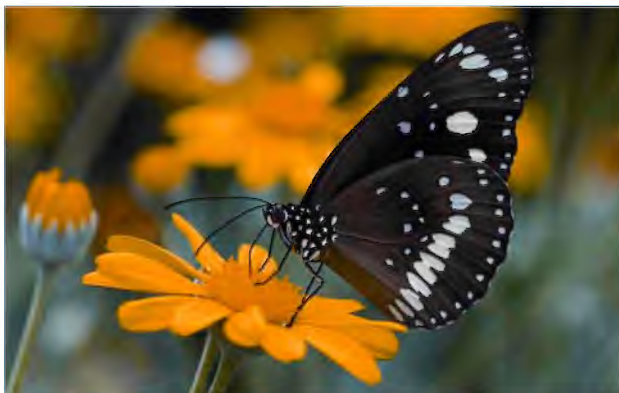


A PICTORIAL STORY

The Life Cycle of a Common Crow: *Euploea core* (Cramer, [1780])

A picture story by *Hongming Kan*





Moths of Victoria. Part 1 Silk Moths and Allies: BOMBYCOIDEA
by Peter Marriott, published by the Entomological Society of Victoria



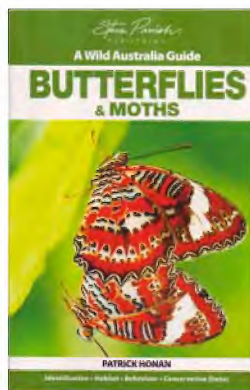
This fascinating booklet published late last year, illustrates with colour images all of the Bombycoidea that occur in Victoria. This superfamily includes, Snout Moths (Lasiocampidae), Anthelids (Anthelidae), Bag Moths (Eupterotidae), Silk Worms (Bombycidae), Emperor Moths (Saturniidae) and Hawk Moths (Sphingidae). These are among our largest and most beautiful moths. Also included are images of some eggs, larvae and pupae and to top it off, a CD that provides an additional 130 pages of images and information, is also included.

The booklet is well laid out with colour tabs on the margins for each family. Many of the moths have more than one image, especially when one includes the CD. There are notes on the identity of families and some specific differences between species and the CD contains distributional data.

This is the first part in a series, which is attempting to image all of the 2000 odd species that occur in Victoria. With many of these moths having a distribution well beyond Victoria, this booklet is a must for anyone interested in Lepidoptera especially moths.

Congratulations to Peter Marriott and his team at the Entomological Society of Victoria.

Peter Hendry



“Butterflies and Moths”: A Wild Australia Guide.
Author: Patrick Honan. Publisher: Steve Parish Publishing, 2008

This recently published 96 page paperback in the Steve Parish Publishing Wild Australia Guide series of (currently) 20 books provides an introduction to our butterfly and moth fauna that would be useful both for beginners and visitors to Australia. Because of the publisher’s limitations it only treats 25 of our 400 butterfly species and 28 of several thousand known moth species.

The introductory chapters cover life cycle, growth and metamorphosis, reproduction, wing colour, finding food,



natural enemies and defensive strategies. There is also a small section on conservation. Each species treated has short entries on description, life history, behaviour, size, habitat and distribution.

The full colour images include many larvae and refreshingly all adults are of live specimens, photographed either in natural bushland or in the Melbourne Zoo invertebrate enclosures.

There is a useful 2 page glossary and adequate index, followed by a 'Links and Further Reading' section which lists several books both current and historical and websites of organizations throughout Australia (sadly not including that of our own club). A major oversight was the lack of any reference to the amateur clubs and societies that study insects Australia-wide, which would have been handy for any budding enthusiasts to make contact with like-minded individuals.

It is unfortunate that several significant errors have appeared that otherwise spoil this small book. Some of the major ones are listed herein.

General and sweeping statements:

e.g. Skippers do not feed on a "wide range of foodplants" – their host plant range is quite narrow, mainly grasses and sedges.

Periids do not feed on a "vast array of foodplants from many different plant families" – their range is limited e.g. Mistletoes, *Capparis*, *Cassia* and *Senna*.

"most Birdwing species live in New Guinea". Not true – Indonesia and the Philippines both have at least as many species.

Caterpillars "moult 5 times" – should be moult 4 times between 5 instars.

Caterpillars "have rather large eyes, but poor eyesight" – not true, they only have small eyelike structures mostly capable of telling light from dark and some movements.

And I'm not sure that comparing the shape of larvae to "sausages" is appropriate for any other than hawk moth larvae!

Nomenclatural errors:

The Cairns Birdwing is *Ornithoptera euphorion* not *O. priamus* which is the Cape York and P.N.G. birdwing. (This was correct on p.21, but not on p.28!)

Some old historical names, now inappropriate, have been used e.g. "Imperial White" for our magnificent Imperial Jezebel and "Imperial Blue" for the more appropriate Imperial Hairstreak.

On page 68 under the chapter heading of "Anthelid Moths" is a photograph of the Saturniid moth *Syntherata janetta*!

There are also several minor errors of hostplant and distributional data (mostly outdated information).



As there are no acknowledgements, I have been unable to ascertain whether the author had his manuscript checked by a colleague. Had this been done many of these errors could have been avoided.

Notwithstanding the above critical comments, these errors do not detract from the overall impact of the book, and the author has been able to achieve a useful, easily readable and quite cheap alternative to the now out of print 1992 "Flying Colours" of Pat and Mike Coupar.

The book is available from the club for \$12 plus \$3 P&H (members price) and may be available from some newsagents and post offices.

John Moss

LETTERS



Enlarged view showing brown piliform scales of male Richmond Birdwing (wing on left, abdomen on right)

Recently one of my Richmond Birdwing larvae left the vine to find a place to pupate. I saw it first on the wall and soon afterwards found it writhing around on the ground covered in ants which were bent on killing it. I took the larva away and removed all the ants with a small soft paint brush. The obviously distressed larva was placed in a styrofoam box where it pupated the next day. A month later a male butterfly emerged. It was removed from the box and allowed to hang while its wings expanded and hardened. When it was ready it flew away.

A number of photos were

taken, one showing the piliform (hairlike) wing scales which are situated on the dorsal edge of the rear wing between the base and the tornus. When I saw the way the piliform scales were arranged I doubted if the butterfly would be able to fly properly. Although not the function, the aerodynamic effect of these scales would be like air brakes. Big jets use them as do gliders, but these flaps are generally on the upper-surface of the wings near the area of maximum curvature. Air brakes or no, this Birdwing flew as well as



Newly emerged male Birdwing



any other Birdwing I have seen flying.

Handling the larva was done under an endorsement to the permit issued to D.S. Sands (Permit No. WISP00582002). However, even without that permit I would have saved the larva, who wouldn't? I have no permit to handle the butterfly, but the circumstances were such that not doing so would have resulted in the loss of the Birdwing butterfly. Seeing and photographing the piliform scales was an unexpected bonus.

I thought that such interesting photos should be shared with other members of the Butterfly and Other Invertebrates Club.

Photos Hilton Selvey

Hilton Selvey

Comment: Hilton's comments about the legal aspects of handling Birdwing larvae and adults (or other protected species for that matter) warrant a comment. It is hard to fathom why in the supposedly enlightened year of 2009, politico-legal correctness should deter one from undertaking commonsense activities which enhance, rather than obstruct, the livelihood of our native insects. **John Moss**



Theclinessthes onycha mating pair
Photo Jak Guyomar

Herewith is a photo of a mating pair of *Theclinessthes onycha*, taken in our garden at Gumdale on 13 Nov. 2008 at 0930.

There were around 40 larvae on one Cycad plant in late Oct. It was only approx. 60cm high. It copped a good munching. I did not count the larvae on the other plants.

The adults have been here in a fair number (around 6 to 8 at any one time) for the last couple of months. Still 3 or 4 here today (30.11.08).

Jak Guyomar

Ed.: John Moss is preparing an article on this butterfly and its (so far) inadequately explained abundance in South-east Qld in recent years, which has resulted in serious damage to cultivated cycads, in particular the popular Japanese *Cycas revoluta*. There are several theories doing the rounds as to the reason for this phenomenon. John would be grateful for any comments, which will be duly acknowledged.



YOU ASKED

Attached are 2 photos of green cicadas I took last week (Ed.: Email dated 23.11.2008) on an afternoon just before one of those storms when the humidity was high and there was lightning and thunder around.

The big green cicada was calling loudly, and was one of many in our yard, the first time I've heard them here in Beenleigh in 30 years.

While I was photographing it, another smaller cicada came down and landed within 30 cm of it. I guess it was attracted to the call and was probably a female.

Are they Bladder Cicadas? And I gather the smaller one is a female?

Glenn Leiper

Photos Glenn Leiper

Glenn, the cicada depicted in your wonderful photos is the Large Bottle Cicada (currently *Glaucopsaltria viridis*) although there is some conjecture about its taxonomic status – Lindsay Popple (pers.comm.). It is readily distinguished from the Bladder Cicada by the wings which are clear rather than opaque. The call is also quite different, with the Bladder Cicada making a frog-like sound and the Large Bottle Cicada a more whistling call, both calling mainly at dusk. Both these calls (and many others) can be heard on Lindsay Popple's excellent website: Australian Cicadas: the cicadas of central eastern Australia.

In addition, the Large Bottle Cicada also makes a quite different call during the day which has been likened to the tapping on a closed empty tin can.

And yes Glenn, the smaller one is the female.

Rob MacSloy





Mucous puddle

On 2 November I went for a walk in Raven Street Reserve, Chermside West. On the boardwalk there was a puddle and I noticed moisture dripping onto the boards from an overhanging shrub. Close inspection revealed the source of the drips was a group of insects in the shrub excreting a foamy mucous like substance. Can someone please identify these insects? Are they a larval phase of a fly? The amount of moisture they were producing was quite amazing.

Michael Hutchison

Photos Michael Hutchison

In answer to Michael's query about the "mucous producing bugs", I should initially refer our readership to the article I wrote on "Spittle Bugs" in the September 2000 (issue

No. 18) BOIC Newsletter. As reported in that paper I had noticed, in October and November 1999, colonies of the insects on *Angophora woodsiana* in my Capalaba garden. I had also found them on the dry scrub tree *Bridelia exaltata* at Mt. Cotton and on stems of Blood Vine (*Austrosteenisia blackii*) at Cameron Scrub Reserve near Ipswich. Others had discovered them on Cheese Trees (*Glochidion ferdinandi*) at Carindale and Rochedale at about the same time – the late Spring of 1999, following two successive years of good winter rains.

It is apparent that the same seasonal conditions have recurred (after an interval of 9 years) with colonies being reported (early November 2008) at Brisbane's The Gap and Indooroopilly and at Closeburn in the Samford Valley on Native Wisteria vines (*Callerya megasperma* – was *Millettia megasperma*). This story was recently broadcast on Channel Ten's "Totally Wild" program and presented at the Entomological Society of



Mucous producing bugs



Queensland's "Notes and Exhibits" meeting on 8 December 2008 by Queensland Museum entomologist Christine Lambkin.

Just as in 1999, these latest occurrences have been identified as being caused by large numbers of clustered nymphs of the spittlebug *Amarusa australis* (Jacobi) – was *Eoptelyus australis* – a member of the small cercopid family Aphrophoridae (belonging to the large bug order Hemiptera) and “cousins” of our familiar cicadas.

As in cicadas these spittlebugs have a sucking proboscis (or rostrum) which they use to penetrate the bark and tap into the plant's vascular system. The nymphs form a protective foam or froth around themselves by expelling air through their liquid body excretions. The froth breaks down to droplets and falls from the vegetation like localised rain – thus the coined term “raining trees”!

As large volumes of sap are used, the plants could be severely stressed. However, leaf droop is rarely observed – the vascular system must be very efficient at replacing the water and solutes from root access to adequate substrate water sources, which probably includes recycling of part of the dripping secretions.

Since I wrote the above, Lois Hughes informs me that the “raining tree” phenomenon occurred on her property last October/November, the plant being the Cheese Tree (*Glochidion* sp.) which incidentally is the plant from which the type specimens were originally collected. Michael, I would be interested to know the identity of the plant your spittlebugs were utilising.



The accompanying photo (with thanks to Peter Hendry) is of an adult I collected in my garden in late October 1999.

Adult spittlebug, *Amarusa australis* (Jordan)
Photo Peter Hendry

John Moss

ERRORS

In Metamorphosis Australia No. 51

Page 3 - In this issue – “Emperor Gum Moth” should read “Emperor Mistletoe Moth”

Page 8 - The correct family name is “Flacourtiaceae” not “Salicaceae”

Page 29 - “Hyrsinacea” should read “Mysinaceae”



WHAT INSECT IS THIS?

We will have the answer in the June Magazine.

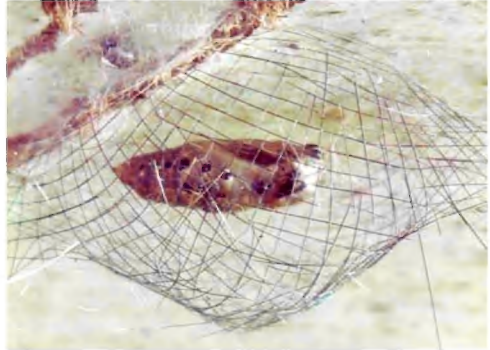


Photo John Moss

OTHER GROUPS' ACTIVITIES

The Society for Growing Australian Plants (Qld Region) Inc. will hold their Autumn Sale of Australian Native Plants on **Saturday 9th May 2009** from **9 am to 3 pm** at the **Grovely TAFE**. A wide range of Native Plants will be on sale - Rare - Old Favourites - Grafted - Unusual - Drought Tolerant - Bird, Frog or Insect Friendly. The prices are friendly too. Admission FREE. For more information - call 3870 8517 or 3202 5008 or visit SGAP Qld Region 'on line'- www.sgapqld.org.au.

Indigi Day Out – 6th and 7th June, 2009 – Discover the wonders of IndigiScapes on this fun-filled family weekend. There will also be many wildlife displays and mini workshops plus a music festival.

NEW BOOK RELEASE

The Complete Field Guide to Stick and Leaf Insects of Australia – This is the first book on Australian phasmids for nearly 200 years and covers all known stick and leaf insects. It includes photographs of all species, notes on their ecology and biology as well as identification keys suitable for novices and professionals. We will have a review of this book in the June Magazine.

The book is available from the club for \$40 plus \$5 P&H or from club displays.



BOIC SWAP MEET!

When and where: At IndigiScapes, to follow the AGM, 4th April 2009.

What: The idea of a swap meet is to trade or give away your unwanted items that others may find useful. For the BOIC swap meet please bring along any items that might come in handy for potting up host plants, butterfly gardening, invertebrate collecting, etc. Please limit the swap meet items to ones relevant to the club - no car parts please!! Examples include empty tubes and pots (always needed!), plant tags, host plants, host plant seeds, old invertebrate books, newsletters and other publications, invertebrate collecting equipment such as nets... Also note that IndigiScapes may have host plants for purchase at their monthly plant sale from 9am until 12pm on the same day as the AGM.

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Annual General Meeting

What: Our Annual General Meeting and election of Office Bearers. This will be followed by a Swap Meet. IndigiScapes Tea Gardens cater for delicious morning teas, lunches, and afternoon teas at a very reasonable cost if you wish to partake before or after the meeting. The AGM will be followed by a Swap Meet (see previous notice).

When: **Saturday 4th April, 2009** from 10am for the AGM

Where: Redlands IndigiScapes Centre, 17 Runnymede Road, Capalaba

Contact: Daphne 3396 6334 or email daphne.bowden1@bigpond.com to RSVP or for more details

Planning and Management Meeting

What: Our planning meetings are informative and interesting. As well as planning our activities we share lots of information. All members are welcome as this activity is also a general meeting of members.

When: **Saturday, 16th May, 2009** from **1.30 pm**

Where: Peter Hendry's home at Sheldon – address supplied on RSVP

R.S.V.P.: Peter on 3206 0048 or Daphne 3396 6334

Indigi Day Out (see Other Groups' Activities for details)

What: We will be holding a display with mini workshops on butterflies and native bees. We will have all of our merchandise for sale.

When: **6th & 7th June, 2009** from 9am to 4 pm

Where: Redlands IndigiScapes Native Botanic Gardens, 17 Runnymede Road, Capalaba

Contact: Daphne 3396 6334 or email daphne.bowden1@bigpond.com for more details or IndigiScapes on 3824 8611



DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is a platform for people to express their views and observations. These are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss, Lindsay Popple and Paul Brock for scientific referencing and proof reading of various articles in this issue of the newsletter
- Printing of this publication is proudly supported by Brisbane City Council



We would like to thank all these people for their contribution.

Dedicated to a better Brisbane

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible. **Membership fees are \$20.00 for individuals and \$25.00 for schools and organizations.** If you wish to pay electronically, the following information will assist you: BSB: **484-799**, Account No: **001227191**, Account name: **BOIC**, Bank: **Suncorp**, Reference: your membership no. and surname e.g. **234 Roberts**.

Butterfly and Other Invertebrates Club Inc.
PO Box 2113
RUNCORN Q. 4113

Next event – Annual General Meeting - Saturday 4th April, 2009 from 10am (see Programme for details)



Magazine of the Butterfly and Other Invertebrates Club #52 – Page 36